



Coalition for a Sustainable Delta

November 17, 2010

VIA E-MAIL

Phil Isenberg
Chair, Delta Stewardship Council
650 Capitol Mall
Sacramento, CA 95814

Re: Comments on the Delta Ecosystem White Paper

Dear Chairman Isenberg:

The Coalition for a Sustainable Delta (Coalition) is writing to provide comments on the Delta Stewardship Council (Council) Delta Ecosystem White Paper (white paper). It is our understanding that the white paper will be considered in the development of the framework for the Delta Plan and alternatives in the Delta Plan Environmental Impact Report (DEIR), but that a second draft of the white paper will not be prepared by Council staff. Accordingly, we focus our comments on highlighting topics that need further development, rather than commenting on specific changes to the language within the document.

Given the vast body of scientific material pertaining to the Delta and Suisun Marsh ecosystem, Council staff were faced with the daunting task of summarizing the current state of knowledge on an expansive topic. Although the white paper covers much ground in its first draft, it has omitted relevant and important literature, which we describe below. At times, the white paper also fails to provide references and context for statements of fact that merit a greater precision of language appropriate to such a topic. Finally, several sections in the white paper provide incomplete information on their given topics. These shortcomings in the white paper should be addressed before its contents are incorporated into the Delta Plan and DEIR.

For example, the section of the white paper discussing the delta smelt (pp. 2-18 to 2-20) is missing important references, such as:

- Thomson et al. (2010) and Mac Nally et al. (2010), two multivariate analyses, conducted by working groups convened by the National Center for Ecological Analysis and Synthesis (NCEAS) and the Interagency Ecological Program (IEP) to study the decline of pelagic fishes in the Delta including delta smelt, and published in the journal *Ecological Applications*;

- Feyrer et al. (2007), the article which is cited as the basis for the requirement to manage the position of fall X2 (the isohaline of total salinity 2) under the delta smelt biological opinion;
- National Research Council (2010), the recent NRC report which includes criticisms of the “weak statistical link” used to justify the fall X2 action and other concerns regarding the Reasonable and Prudent Alternatives (RPAs) imposed on water project operations under the delta smelt and salmon biological opinions; and
- Glibert (2010), which discusses impacts to the delta smelt food web from ammonium originating from wastewater discharges.

The failure to include the above references is an oversight—one that may reflect an insufficient review of available literature. Additionally, the white paper contains examples of generalized statements that lack the rigor and specificity required to provide useful scientific information upon which management decisions will be made.

In the discussion of delta smelt entrainment on page 2-19, the white paper observes that “large numbers” of delta smelt are entrained at the state and federal water projects. Without any reference to supporting scientific literature and no information on the numbers of entrained delta smelt relative to either the total population or other sources of mortality, it is impossible for the reader to evaluate this assertion. Throughout this document, the language should be examined for rigor and precision, and statements should be supported by references.

The section of the white paper discussing anadromous salmonids (pp. 2-20 to 2-21) also lacks several important references, such as:

- National Marine Fisheries Service (NMFS) Draft Central Valley Salmon and Steelhead recovery plans (NMFS 2009), which discusses predation, and other relevant topics;
- Lindley et al. (2009), which addresses the role played by ocean conditions, linked to the 2007 Sacramento River fall Chinook stock collapse; and
- a striking lack of even a single reference in the paragraph discussing salmonid entrainment.

As with the discussion of entrainment of delta smelt, the white paper fails to provide references for statements regarding salmonid entrainment and fails to provide any information on the proportion of fish entrained, even though there is ample data on this subject. The white paper also fails to acknowledge an extensive body of work regarding Chinook salmon survival during migration through the Delta (e.g., Perry et al. 2009, Perry & Skalski 2009b). And, the white paper fails to provide any quantitative information regarding predation impacts on salmonids even though such information is available (e.g., Hanson 2009, Lindley & Mohr 2003, NMFS 2009).

Further, the white paper lumps steelhead and Chinook salmon together in its discussion of salmonids, despite the fact that these two species have significantly different life

histories, biological requirements and susceptibility to stressors. For instance, steelhead parr spend on average two years in freshwater, growing between 15-20 cm before migrating to the ocean, whereas Chinook spend on average one year in freshwater, growing only to an average size of 4-8 cm before migrating. These size and timing differences result in different vulnerabilities to stressors and different responses to conservation measures. In fact, the May 13, 2010 Independent Panel Review of the Vernalis Adaptive Management Program (VAMP) noted that “[l]ife history differences between Chinook salmon and steelhead are striking”. In an attempt to cover a broad set of topics, the white paper must avoid sacrificing important details relevant to future management decisions.

Finally, some sections of the white paper provide only partial information on the designated topic. For instance, in Section 6, the three listed items (conservation plans, biological opinions and levee vegetation policy) represent a small fraction of the “numerous regulations, policies, programs, and plans” that were to be described in this section of the white paper. This section is clearly incomplete. As recognized on page 6-1, such regulations, policies, programs and plans may constrain or influence future decisions and actions under the Delta Plan. The topic of existing regulations, authorities and plans merits a white paper of its own, and the discussion should include information on the Department of Fish and Game, Fish and Game Commission, State Water Resources Control Board and Regional Water Quality Control Board jurisdiction. Also absent from Section 7’s discussion of future issues affecting the Delta ecosystem is a reference to contaminants, emerging or otherwise. Finally, Section 4 contains an incomplete discussion of the extent and impact of the numerous upstream diversions from the Delta, including diversions associated with uses in the San Francisco and East Bay areas of Northern California. Before the white paper is incorporated into the Delta Plan, these gaps should be filled.

The Coalition appreciates the opportunity to comment on the Delta Ecosystem White Paper. We hope you will consider our suggestions to ensure that rigorous scientific information supports management decisions under the Delta Plan.

Coalition for a Sustainable Delta

A handwritten signature in black ink, appearing to read 'W. D. Phillimore', with a stylized, flowing script.

By: William D. Phillimore, President

Attachment I. List of References

- Feyrer, F., M. L. Nobriga, and T. R. Sommer. 2007. Multi-decadal trends for three declining fish species: habitat patterns and mechanisms in the San Francisco Estuary, California, USA. *Canadian Journal of Fisheries and Aquatic Sciences* 64:723-734.
- Glibert, Patricia M. 2010. Long-Term Changes in Nutrient Loading and Stoichiometry and Their Relationships with Changes in the Food Web and Dominant Pelagic Fish Species in the San Francisco Estuary, California. *Reviews in Fisheries Science*, 18: 2, 211-232
- Hanson, C.H. 2009. Expert Report of Dr. Charles H. Hanson Per Rule 26(a)(2). *Coalition for a Sustainable Delta et al. v. McCamman et al.*, No. 1:08-CV-00397-OWW-GSA. October 2009.
- Lindley, S. T.; C. B. Grimes, M. S. Mohr, W. Peterson, J. Stein, J. R. Anderson, L. W. Botsford, D. L. Botton, C. A. Busack, T. K. Collier, J. Ferguson, J. C. Garza, A. M. Grover, D. G. Hankin, R. G. Kope, P. W. Lawson, A. Low, R. B. MacFarlane, K. Moore, M. Plamer-Zwahlen, F. B. Schwing, J. Smith, C. Tracy, R. Webb, B. K. Wells, and T. H. Williams. 2009. What caused the Sacramento River fall Chinook stock collapse? National Marine Fisheries Service, Southwest Fisheries Science Center. NOAA_TM_SWFSC-447.
- Lindley, S.T. and M.S. Mohr. 2003. Modeling the effect of striped bass (*Morone saxatilis*) on the population viability of Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*). *Fish. Bull.* 101:321-331.
- Mac Nally, Ralph, James R. Thomson, Wim J. Kimmerer, Frederick Feyrer, Ken B. Newman, Andy Sih, William A. Bennett, Larry Brown, Erica Fleishman, Steven D. Culberson, and Gonzalo Castillo. 2010. Analysis of pelagic species decline in the upper San Francisco Estuary using multivariate autoregressive modeling (MAR) Ecological Applications 20:1417–1430.
- National Marine Fisheries Service. 2009. Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead. Sacramento Protected Resources Division. October 2009.
- National Research Council (NRC). 2010. A Scientific Assessment of Alternatives for Reducing Water Management Effects on Threatened and Endangered Fishes in California's Bay Delta.
- Russell Perry et al. Estimating survival and migration route probabilities of juvenile Chinook salmon in the Sacramento-San Joaquin River Delta (April 2, 2009).
- Russell Perry & John Skalski. Survival and migration route probabilities of juvenile

Chinook salmon in the Sacramento-San Joaquin River Delta during the winter of 2007-2008 (July 15, 2009).

Thomson, James R., Wim J. Kimmerer, Larry R. Brown, Ken B. Newman, Ralph Mac Nally, William A. Bennett, Frederick Feyrer, and Erica Fleishman. 2010. Bayesian change point analysis of abundance trends for pelagic fishes in the upper San Francisco Estuary. *Ecological Applications* 20:1431–1448.